

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 06194274

PUBLICATION DATE : 15-07-94

APPLICATION DATE : 25-12-92

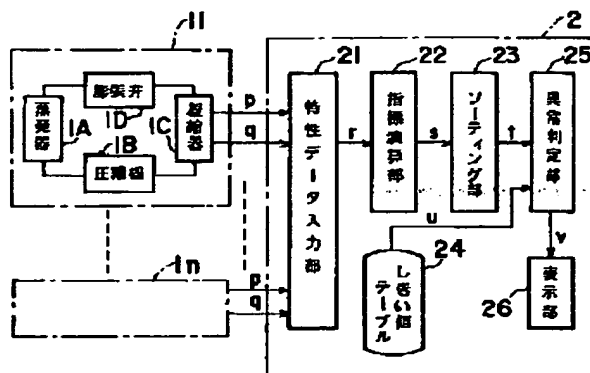
APPLICATION NUMBER : 04345038

APPLICANT : TOSHIBA CORP;

INVENTOR : KUMAMARU TOMOO;

INT.CL. : G01M 19/00

TITLE : METHOD AND APPARATUS FOR  
MONITORING ABNORMALITY OF  
DEVICE GROUP



ABSTRACT : PURPOSE: To decide with satisfactory sensitivity by calculating a monitoring index for deciding an abnormality of function from characteristic data of device group at each device, sorting the indexes in the order of size to be monitored, and deciding it as an abnormality if a variation occurs in the order.

CONSTITUTION: A condensation pressure (p) and a coolant outlet temperature (q) are input as characteristic data of heat source device group 11-1n via a characteristic data input unit 21. Then, a monitoring index 1 is calculated. That is, a condensation temperature (y) is calculated from the pressure (p) by using refrigerant saturation characteristics. An approaching temperature 1 of a difference between the temperature (y) and the temperature (q) is obtained. It is repeated for the number (n) of the heat source devices in a feedback loop. Thereafter, n pieces of approaching temperature 1<sub>1</sub>-1<sub>n</sub> are sorted in the order of its level. Then, a malfunction of characteristic deterioration, etc., is decided. That is, whether the device group 11-1n are in operated state or nor is checked according to whether the temperature 1 exceeds a threshold value U or not. If there is a variation in the sorting order of the temperatures 1, it is decided as to be abnormal by a malfunction deciding unit 25, and displayed on a display 26.

COPYRIGHT: (C)1994,JPO&Japio